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Appendix 1. Timeline for physical therapy guideline

	RTSA	ORIF
Anti edema elbow, hand and fingers	Day 1	Day 1
Positioning of the scapula	Day 1	Day 1
Pendula exercises. Passive and active assisted exercises in forward flexion, abduction and rotation	Day 1*	Day 1
Active exercises. Functional exercises	6 weeks	4 weeks
Active dynamic strengthening exercises. Isometric resistance exercises	8 weeks	6 weeks
Progress strengthening exercises, weight-bearing exercises through the upper extremity to improve shoulder proprioception	12 weeks	8 weeks

RTSA: Reverse Total Shoulder Arthroplasty, ORIF: Open Reduction Internal Fixation with angular stable plate, N weeks = treatment start after n weeks. * Gradually increasing mobility, external rotation to neutral position the first six weeks after surgery.

Appendix 2. Preoperative radiographical measurements

	RTSA (64)		ORIF (60)	
OTA/AO classification				
B2	26	(40.6%)	29	(48.3%)
C2	38	(59.4%)	31	(51.7%)
Inclination AP				
Neutral ($135^{\circ} \pm 10^{\circ}$)	9	14.1%	9	15%
<45° valgus	18	28.1%	9	15%
≥45° valgus	10	15.6%	8	13.3%
<30° varus	15	23.4%	15	25.0%
≥30° varus	12	18.8%	19	31.7%
Inclination scapula-Y				
<45°	32	50%	22	36.7%
≥45°	32	50%	38	63.3
Head-shaft displacement				
<50%	25	39.1%	36	60%
≥50%	39	60.9%	24	40%
Greater tubercle displacement				
<10 mm	22	34.4%	32	53.3%
10-20 mm	24	37.5%	14	23.3%
> 20	18	28.1%	14	23.3%
Minor tubercle displacement				
< 5 mm	44	68.8	44	73.3%
≥ 5 mm	19	29.7%	16	26.7%

OTA/AO classification of 2007¹⁵. Inclination AP: inclination of the humeral head with relation to the humeral shaft in the antero-posterior projection, the neutral angle* was set to $135^{\circ} \pm 10^{\circ}$, and varus $>30^{\circ}$ and valgus $>45^{\circ}$ were set as cut-off values. Inclination scapula-Y: humeral head inclination with relation to the humeral shaft in the scapula-Y projection. Head-shaft displacement: horizontal displacement of the shaft with relation to the humeral head.

*aofoundation.org.

Appendix 3. Postoperative and follow-up radiographical measurements for RTSA

	Postoperative	24 months
RTSA: n= 64	n=62*	n=58
Stem inclination		
Neutral ($0 \pm 2^\circ$)	16	12
Valgus $> 2^\circ$	32	33
Varus $> 2^\circ$	14	13
Inferior overhang		
≤ 5 mm	21	
>5 mm	41	
Notching		
Grade 0		48
Grade 1		4
Grade 2		6
Greater tubercle displacement		
<10 mm	47	33
10-20 mm	10	12
> 20	3	11
Greater tubercle resorption		
Yes		5
Periarticular ossification		
Yes		28

RTSA: Reverse Total Shoulder Arthroplasty. *Two patients did not receive treatment as allocated. Stem inclination: inclination of the stem with relation to the humeral shaft in the AP-projection. Inferior overhang: measurement from the inferior edge of the glenoid to the inferior edge of the glenosphere. Notching: erosion of the inferior glenoid neck due to plastic insert impingement classified with Nerot score: Grade 0 = no notching, grade 1 = inferior pillar, grade 2 = inferior fixation screw, grade 3 = over lower fixation screw, grade 4 = to the central peg.

Appendix 4. Postoperative and follow-up radiographical measurements for ORIF

	Postoperative	24 Months
ORIF n=60	n=60	n=49
Inclination AP*		
Neutral ($135^{\circ} \pm 10^{\circ}$)	39	30
<45° valgus	13	7
<30° varus	8	6
≥30° varus	0	4
Inclination scapula-Y*		
<45°	55	42
≥45°	5	4
Greater tubercle displacement*		
<10 mm	53	41
10-20 mm	4	3
> 20	2	3
Greater tubercle resorption*		
Yes (>50%)		2
No		46
Screw penetration		
Yes	2	9
Avascular necrosis (AVN)		
None		34
< 50%		4
≥ 50%		11
Union		
Yes		48
No		1

ORIF= Open Reduction Internal Fixation. Inclination AP= inclination of the humeral head with relation to the humeral shaft in the AP-projection. Inclination scapula-Y= Inclination of the humeral head with relation to the humeral shaft in the scapula-Y projection. *Missing values within the categories reflect that some radiographic measurements were inconclusive.